CLAIMS

1. An apparatus for treating urinary incontinence, comprising:

(a) a support section adapted for providing at least one of urethral support and pressure against a portion of the urethra;

(b) an anchoring section adapted for resisting movement of said apparatus;

(c) a normally open expansion mechanism adapted to urge said support section radially outwards; and

(d) a conversion mechanism adapted to provide a mechanical gain such that an axial force used to activate the conversion mechanism is substantially smaller than the reduction in radial force exerted by said support section.

2. Apparatus according to claim 1, wherein said support section comprises a plurality of support arms.

3. Apparatus according to claim 2, wherein said support section is configured to provide urethra support.

4. An apparatus according to claim 3, wherein the expansion mechanism is adapted to urge without a force applied from outside the apparatus.

5. An apparatus according to claim 3 or claim 4, wherein the conversion mechanism is adapted to respond to a deforming force by axially extending, thereby causing radial collapse of the support arms.

6. An apparatus according to claim 5, wherein the expansion mechanism is adapted to revert to the normally open state upon removal of the force.

7. An apparatus according to any of claims 3-6, wherein said distal ends of said support arms apply sufficient force to vaginal walls to ameliorate incontinence.

8. An apparatus according to any of claims 3-7, wherein said conversion mechanism is adapted to urge said support arms radially inwards in response to a force applied from outside the apparatus.

9. An apparatus according to claim 8, wherein the conversion mechanism comprises a string attached to a hub of the expansion mechanism.

10. An apparatus according to any of claims 3-9, comprising:

a loading element connected to the expansion mechanism and adapted to urge at least a portion of the expansion mechanism axially towards said anchoring section.

11. An apparatus according to claim 10, wherein the loading element comprises an elastic string adapted for attachment to a hub section of the expansion mechanism.

12. Apparatus according to any of claims 3-11, wherein said support arms are hinged.

13. Apparatus according to claim 12, wherein said support arms each comprise at least two hinges.

14. Apparatus according to any of claims 3-13, wherein said support arms are flexible.

15. Apparatus according to any of claims 3-14, wherein urethral support is mid-urethral support.

16. Apparatus according to any of claims 3-15, wherein said expansion mechanism and said support section are integrally attached to one another.

17. Apparatus according to claim 16, wherein said integral attachment to one another comprises integral hinges.

18. Apparatus according to any of claims 3-15, wherein said expansion mechanism and said support section comprise separate elements assembled to form the apparatus.

19. Apparatus according to claim 18, wherein said expansion mechanism and said support section are connected by hinges.

20. An apparatus according to any of claims 3-19, wherein said apparatus is flexible.

21. Apparatus according to any of claims 3-20, wherein the expansion mechanism comprises elastic portions.

22. Apparatus according to any of claims 3-21, wherein the expansion mechanism comprises rigid portions.

23. Apparatus according to any of claims 1-22, wherein urethral support includes bladder neck support.

24. Apparatus according to any of claims 1-23, comprising a cover.

25. Apparatus according to claim 24, comprising a cover collapse mechanism.

26. Apparatus according to any of claims 1-25, wherein said apparatus is rotationally symmetric.

27. Apparatus according to any of claims 1-26, wherein said apparatus is configured to operate independently of a rotational insertion angle.

28. Apparatus according to any of claims 1-27, wherein said apparatus is configured to allow passage of vaginal discharges therethrough when inserted.

29. An apparatus according to any of claims 1-28, wherein the expansion mechanism and the conversion mechanism are separate elements.

30. An apparatus according to any of claims 1-29, wherein substantially smaller is less than 70% of the reduction in radial force exerted by the support section.

31. An apparatus according to any of claims 1-29, wherein substantially smaller is less than 50% of the reduction in radial force exerted by the support section.

32. An apparatus according to any of claims 1-29, wherein substantially smaller is less than 40% of the reduction in radial force exerted by the support section.

33. An apparatus according to any of claims 1-29, wherein substantially smaller is less than 30% of the reduction in radial force exerted by the support section.

34. An apparatus according to any of claims 1-29, wherein substantially smaller is less than 20% of the reduction in radial force exerted by the support section.

35. A method for ameliorating urinary incontinence, the method comprising:

(a) intra-vaginally inserting an apparatus which provides at least one of support of pressure to a urethra, by a support section thereof;

(b) collapsing said support section after said insertion by application of force generally along an axis of said vagina;

(c) repositioning said apparatus by said axial force; and

(d) reducing said force to allow said support section to uncollapse and re-function as a support section.

36. A method according to claim 35, wherein said collapsing comprises displacing a radially outwards urging element by said force.

37. A method according to claim 35, wherein said collapsing comprises displacing a rigidizing element by said force.

38. A method according to any of claims 35-37, wherein said collapsing comprises applying a greater axial force to start collapsing than to complete collapsing.

39. A method according to any of claims 35-38, wherein said collapsing comprises first increasing a radial extent of said support section as part of said collapsing.

40. A method according to any of claims 35-39, comprising removing said apparatus using said force after (c).

41. A method according to any of claims 35-40, wherein inserting comprises inserting in a manner substantially oblivious to a rotational orientation of said apparatus.

42. An apparatus for treating urinary incontinence, comprising:

(a) an anchor section comprising a plurality of anchor legs; and

(b) a support section axially aligned with the anchor section and comprising a plurality of support arms;

wherein no anchor leg is in direct axial alignment with a support arm.

43. Apparatus according to claim 42, wherein a number of anchor legs is equivalent to a number of support arms.

44. An apparatus for treating urinary incontinence, comprising:

(a) an anchor section comprising a plurality of anchor legs and an anchor connector; and

(b) a support section comprising a plurality of support arms and a support connector;

wherein the anchor connector and support connector are adapted for connection one to another.

45. An apparatus according to claim 44, wherein connection of the anchor connector and support connector one to another fixes an axial alignment of the anchor legs and support arms.

46. An apparatus according to claim 44, wherein connection of the anchor connector and support connector one establishes a rotating joint between the anchor section and the support section.